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ABSTRACT

Further research on the College Student Satisfaction Questionnaire (CSSQ) is reported herein (see TM 000 049). Item responses of two groups of university students were separately analyzed by three different factor analytic methods. Three factors consistently appeared across groups and methods: Compensation, Social Life, and Working Conditions. Two other dimensions, Recognition and Quality of Education, were relatively well supported. The Policies and Procedures factor was not consistently verified as a stable or appropriate dimension in the overall satisfaction of college students. Factor teachings for the two groups on the highest loading items are presented. (DG)

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A Dimensional Analysis of College Student Satisfaction

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College student satisfaction and dissatisfaction, although possibly one of the clearest indicators of the extent of student unrest, is probably one of the least investigated variables in the college setting. Despite the recent sensitization of college administrators and faculty to student attitudes toward the college, there has been only scattered research on college student satisfaction, and as yet no systematic study of this ever-present campus variable.

In the research on college student satisfaction that has been reported in the major literature to date, the selection of satisfaction dimensions has typically been based on logical considerations rather than research evidence. Thus, Berdie (1944) measured "curricular satisfaction." Pervin (1967 a, b) and Pervin and Rubin (1967) dimensioned overall satisfaction chiefly in terms of academic satisfaction, non-academic satisfaction, and general satisfaction. Berdie, Pilapil and Im (1968) measured the satisfaction of graduating university seniors on nine dimensions: curriculum, instructors, social life, professional counseling, faculty advising, opportunities for cultural development, health service, living quarters, and the college in general. Betz, Klingensmith and Menne (1969) measured six satisfaction dimensions: Policies and Procedures, Working Conditions, Compensation, Quality of Education, Social Life, and Recognition.

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Only one study, that of Levine and Weitz (1968), has approached the problem of determining statistically the underlying dimensions of college student satisfaction. Their study investigated, by means of factor analysis, components of the job satisfaction of two groups of graduate assistants in psychology.

Seven first-order factors were extracted: general satisfaction, intellectual stimulation, the assistantship job, the physical environment and setting, constraints, the social future, and a factor combining intellectual stimulation with freedom to pursue intellectual interests.

Since Levine and Weitz used graduate student subjects and emphasized the students' job satisfaction rather than their satisfaction primarily as students, their results may or may not be generalizable to undergraduate student populations.

The present study is part of a project directed at the systematic investigation of college student satisfaction. The purpose of the present research is to provide further information regarding the components of college student satisfaction, based on a factor analytic study of the dimensions of satisfaction for two samples of college undergraduates.

Method

Instrumentation

The College Student Satisfaction Questionnaire (CSSQ; Betz, et al., 1969) was administered as a measure of college student satisfaction. The CSSQ was designed to measure six logically-derived satisfaction dimensions, selected on the basis of job satisfaction research regarding elements of job satisfaction (e.g., Herzberg, Mausner, Peterson, & Capwell, 1957), and also considering possible additional variables unique to the college setting. The six selected dimensions were:

Policies and Procedures - Those policies and procedures that affect the student's activities and progress, such as choice of classes, use of free time, opportunities to influence decisions affecting student welfare.

Working Conditions - The physical conditions of the student's college life, such as the cleanliness and comfort of his place of residence, adequacy of study areas on campus, quality of meals, facilities for lounging between classes.

Compensation - The amount of input (e.g., study) required relative to academic outcomes (e.g., grades), and the effect of input demands on the student's fulfillment of his other needs and goals.

Quality of Education - The various academic conditions related to the individual's intellectual and vocational development, such as the competence and helpfulness of faculty and staff, including advisors and counselors, and the adequacy of curriculum requirements, teaching methods, and assignments.

Social Life - Opportunities to meet socially relevant goals, such as dating, meeting compatible or interesting people, making friends, participating in campus events and informal social activities.

Recognition - Attitudes and behaviors of faculty and students indicating acceptance of the student as a worthwhile individual.

The CSSQ uses a 5-choice Likert-type response, modeled after the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England, & Lofquist, 1967), a measure of job satisfaction. Response alternatives range from "Very dissatisfied," through "Satisfied" to "Very Satisfied," scored one to five points respectively. Scale scores are based on the sum of item responses.

Two forms of the CSSQ were used in the present study: Form A, a 139-item preliminary form of the CSSQ, and Form B, a revised form consisting of 92 items selected from Form A. Internal consistency reliability coefficients for the separate scales of Form B, and for the same items and scales from Form A, range from .85 to .91, with a median of .88 (Betz, et al., 1969).

Subjects

Participants in the study were two groups of students attending Iowa State University during the 1968-69 academic year. The CSSQ was administered at regular house meetings in dormitories, fraternities and sororities, chosen at random from a listing of all organized university residences. The first

student group (N=643) filled out the CSSQ during fall quarter 1968, while the second group (N=492) filled it out during winter quarter 1969.

Students in all groups were asked to give identifying personal information, with the assurance that results would be treated with complete confidentiality, and used for research purposes only.

Analysis

Factor analyses of item responses were carried out separately for the two student groups, using three different factor analytic approaches: the multiple group method with highest correlations in the diagonal of the correlation matrix; the principal components method with unity in the diagonal; and the principle components method with highest correlations in the diagonal. In each case, six factors were extracted and rotated to a Varimax solution. Item loadings of .30 or above were compared across samples for each factor, to determine the extent to which the derived factors were consistent across the two samples, and to ascertain the extent to which the statistically-derived factors resulting from each of the three methods agreed with the logically-developed scales.

Results

The factors resulting from the three types of factor analysis were generally similar. The best results in terms of interpretability were those produced by the principal components analysis with highest correlations in the diagonal, summarized in Tables 1 and 2. Table 1 shows the items loading highest on each of the six factors, separately for the two student groups.

Insert Table 1 about here

Factors are listed in the order of their respective contributions to the common variance for the two analyses. Total variance accounted for by

the six factors was 39 per cent, for both the fall and winter group analyses.

A summary comparing the factor analytic dimensions with the logically-developed CSSQ scale content is shown in Table 2.

Insert Table 2 about here

The first listed factor contained items dealing chiefly with the quality of the educational experiences, with particular focus on the student's intellectual growth. The factor was made up of 19 items which loaded .30 or higher for both the fall and winter student groups. Of the five items with highest loadings for the separate groups, three appeared in the highest five for both groups. Fourteen of the original 16 items of the logically-developed Quality of Education scale were among the 19 factor-analytically derived items for the factor, and the factor was therefore named after the original Quality of Education scale. The five additional items dealt with grades, control over courses taken, and amount of learning in relation to job goals and time spent in school. This factor accounted for 18 and 20 per cent, respectively, of the common variance.

The second listed factor contained 16 items which loaded significantly on the factor for both student samples. There was agreement between the two groups on four of the five items loading highest on the factor, with item content emphasizing the amount of effort required to obtain adequate grades, particularly the pressure to study. The 16 items in this factor included all 15 of the original Compensation scale items, along with one additional item dealing with fairness of grading, and the factor was therefore named after

the logically-developed Compensation scale. It accounted for 17 and 21 per cent of the common variance, for the fall and winter samples respectively, with loadings positive for both samples.

The third factor closely followed the original Social Life scale, and was also named accordingly. There was agreement between groups on four of the five highest loading items. The factor was comprised of 17 items which loaded .30 or above for both student samples, the same 17 items assigned logically to the original Social Life scale. The highest loadings on the factor focused on dating activities, but other inter-student relationships and events also loaded significantly. The contributions to common variance were 22 and 16 per cent respectively for the fall and winter samples. Somewhat surprisingly, the loadings for the fall group were negative, while those for the winter group were positive.

The fourth factor dealt with recognition of student worth, focusing in particular on attitudes of teachers, advisors and counselors toward the student and his individual needs. Item content seemed to stress the student's need for help from university personnel. There was agreement between the two groups on three of the five highest-loading items. The factor was comprised of 14 items, nine of which were derived from the original Recognition scale; the factor was therefore named Recognition: Availability of Help. The factor accounted for 14 and 15 per cent of the common variance, for the fall and winter samples respectively. The fall loadings were positive, while the winter loadings were negative.

The fifth factor was made up of nine items, six of which came from the original Policies and Procedures scale. The agreement of the groups was least

consistent on this factor: while concern with policies and procedures appeared on the factor for both groups, the highest loadings for the fall group seemed to focus on the worth of student ideas, while the highest winter group loadings emphasized student comfort items. The factor was therefore named Policies and Procedures, but was viewed as a tentative dimension with a suggestion of a changing focus across samples or time. The factor contributed 16 and 14 per cent of the common variance in the fall and winter analyses.

The last factor was made up of eight items, all of which came from the original Working Conditions scale and emphasized the adequacy of housing and study conditions. The factor was thus named after the logically-developed Working Conditions scale. There was agreement between the two groups on four of the five highest loading items. The factor contributed 13 and 14 per cent of the common variance, for the fall and winter analyses respectively, and loadings for both groups were positive.

Discussion

The results of the present study are surprisingly consistent, both across the two samples and across factor analytic methods, and are generally encouraging in their support of the logically-derived CSSQ scales.

The between-group agreement on three factors (Compensation, Social Life, and Working Conditions) was extensive, despite the fact that the analyses were based on different student groups, different times in the academic year, and different forms of the CSSQ (although comprised of the same items). These three factors also appeared consistently across the three factor analytic methods. In addition, the items loading .30 or above on the Compensation and Social Life factors agreed almost perfectly with the items

originally designated in the parallel, logically-developed CSSQ scales. All eight of the items loading significantly on the Working Conditions factor came from the original Working Conditions scale.

The extent of agreement across samples and methods on the Quality of Education factor and the Recognition: Availability of Help factor was quite high, again supporting the apparent stability of the factors. Fourteen of the 16 scale items in the Quality of Education scale appeared on the Quality of Education factor. Nine of the 14 items appearing on the Recognition: Help factor came from the appropriate CSSQ scale, giving partial support to the logically developed scale.

The results were relatively inconsistent on the Policies and Procedure factor. Here, the factor derived on the fall group focused particularly on the worth of the student as an individual, as indicated by respect for his ideas, and informal teacher-student contacts. The results of the winter group analysis combined policies and procedures concerns with the availability of comfortable conditions for on-campus resting and lounging. Across the two group analyses, a total of nine items loaded consistently at .30 or above, these being mainly items dealing with policies and procedures, but there were a number of other items on which the loadings differed markedly. In addition, the scale was not supported by the multiple group method of factor analysis, a further indication that Policies and Procedures may not be a stable or appropriate dimension in the overall satisfaction of college students.

The direction of the factor loadings across the two student samples was consistent for four factors: Compensation and Working Conditions, both of which were consistently positive, and Quality of Education and Policies and Procedures, both of which were negative for both groups. On two factors, the

direction of loadings was reversed for the two samples: Social Life was negative and Recognition positive for the fall group, while Social Life was positive and Recognition negative for the winter group. It is tempting to hypothesize that these two factors may represent alternative ways by which students obtain interpersonal support, and that dissatisfaction in one area (e.g., dating life) tends to be compensated for by satisfaction in the other (e.g., relations with and recognition by faculty).

The factors resulting from the present study are in agreement with certain factors extracted by Levine and Weitz (1968), particularly the dimensions of Quality of Education (Levine and Weitz's Intellectual Stimulation Factor), Working Conditions (Physical Environment), and Social Life (Social Future). In addition, there may also be areas of agreement between Levine and Weitz's Constraints factor and the Compensation factor of the present study.

Overall, the results of the present study appear to give considerable support for viewing educational quality, social life, student living and working conditions, compensation (study pressures) and perhaps recognition as important dimensions of college student satisfaction.

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Table 1

Items loading highest on six factors of college student satisfaction, separately for two student groups

Factor and Item	Factor Loadings	
	Fall[a]	Winter[b]
Quality of Education		
The chance to take courses that fulfill your goals for personal growth.	-.52	-.43
The chance to prepare well for your vocation.	-.59	-.67
Your opportunity here to determine your own pattern of intellectual development.	-.58	-.62
The practice you get in thinking and reasoning.	-.59	-.57
The quality of the education students get here.	-.42	-.59
The preparation students are getting for their future careers.	-.46	-.58
The appropriateness of the requirements for your major.	-.57	-.54
Compensation		
The amount of time you must spend studying.	.68	.66
The difficulty of most courses.	.61	.66
The amount of work required in most classes.	.58	.62
Teachers' expectations as to the amount that students should study.	.56	.63
The amount of study it takes to get a passing grade.	.64	.61
The pressure to study.	.63	.55
Social Life		
The chances for men and women to get acquainted.	-.78	.80
The choice of dates you have here.	-.74	.81
The chance of having a date here.	-.72	.79

Factor and Item	Factor Loadings	
	Fall[a]	Winter[b]
The activities that are provided to help you meet someone you might like to date.	-.76	.74
The chance to work on projects with members of the opposite sex.	-.63	.61
The social events provided for students here.	-.67	.47
<u>Recognition: Availability of Help</u>		
The ability of most advisors in helping students develop their course plans.	.53	-.60
The interest that advisors take in the progress of their students.	.55	-.63
The availability of your advisor when you need him.	.45	-.59
The counseling that is provided for students here.	.31	-.53
The amount of personal attention students get from teachers.	.48	-.33
The friendliness of most faculty members.	.46	-.42
The willingness of teachers to talk with students outside of class time.	.38	-.45
<u>Policies and Procedures</u>		
The chance to participate in making decisions about school regulations.	-.59	-.51
The extent that student opinions influence important decisions about the school.	-.62	-.38
The chance to tell the administration what changes you think are needed in the coursework here.	-.57	-.34
The chance for informal contacts between teachers and students outside of class.	-.54	-.32
The respect that is shown for the ideas of students.	-.55	-.17
The availability of comfortable places to lounge.	-.18	-.60

Factor and Item	Factor Loadings	
	Fall[a]	Winter[b]
Policies and Procedures		
The places where you can go just to rest during the day.	-.20	-.61
The places provided for students to relax between classes.	-.23	-.59
The concern here for the comfort of students outside of classes.	-.47	-.47
Working Conditions		
The chances of getting a comfortable place to live.	.47	.59
The noise level at home when you are trying to study.	.47	.66
The cleanliness of the housing that is available for students here.	.46	.50
The availability of good places to study.	.64	.60
The availability of quiet study areas for students.	.56	.58
The chance to live where you want to.	.49	.45

[a]For fall student group, N = 643

[b]For winter student group, N = 492

Table 2

Comparison of Significant Factor Loadings for CSSQ Items,

Based on Responses by Two Groups of University Students.

Factor	Common variance Fall[a]	Winter[b]	No. of items agreed upon	No. of items from logical scale	No. of items from other scales	No. of items in logical scale
Quality of Education	18.30	20.22	19	14	5	16
Compensation	17.08	20.99	16	15	1	15
Social Life	21.66	15.79	17	17	0	17
Recognition: Help	13.95	15.26	14	9	5	17
Policies and Procedures	15.52	13.71	9	6	3	16
Working Conditions	13.49	14.04	8	8	0	13

[a]For fall student group, N = 643

[b]For winter student group, N = 492